AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at **page 71, line 3**, and insert the following rewritten paragraph:

Fig. 9 is a structured flowchart showing main routine processing of the gait generating device 100. The following is a detailed explanation. First, in S010, various initializing operations, including the initialization of time t to zero, are performed. This processing is carried out at startup or the like of the gait generating device 100. Then, the gait generating device 100 proceeds to S014 via S012 and waits for a timer interrupt for each control cycle (the computation processing cycle of the flowchart of Fig. 9). The control cycle is denoted by Δt. Thereafter, the processing from S014 to S032 ~~S32~~ is repeated for each control cycle Δt.

Please replace the paragraph beginning at **page 110, line 27**, and insert the following rewritten paragraph:

The corrected desired foot position/posture (trajectory) with deformation compensation are sent from the composite-compliance operation determiner 104 to the robot geometric model 102. The corrected desired foot position/posture with deformation compensation means the desired foot position/posture of each foot 22 that have been corrected such that an actual floor reaction force detected by the six-axis force sensor 50 approximates a desired floor reaction force, considering the deformation of the compliance mechanism 72 of each leg 2 (deformation caused by a floor reaction force acting on each leg 2). Upon receipt of the desired body

position/posture (trajectory) and the corrected desired foot position/posture (trajectory) with deformation compensation, the robot geometric model 102 calculates joint displacement commands (values) for twelve joints of the legs 2 and 2 that satisfy them and sends the calculated commands (values) to the displacement controller 108. The displacement controller 108 uses the joint displacement commands (values) calculated by the robot geometric model 102 as desired values to carry out follow-up control of the displacement of the twelve joints of the robot 1. The robot geometric model 102 also calculates displacement ~~specification~~ commands (values) of arm joints that satisfy desired arm postures and sends the calculation results to the displacement controller 108. The displacement controller 108 uses the joint displacement commands (values) calculated by the robot geometric model 102 as desired values to carry out follow-up control of the displacement of the twelve joints of the arms of the robot 1.

Please replace the paragraph beginning at **page 116, line 10**, and insert the following rewritten paragraph:

Zsup: Vertical position of supporting leg foot mass point; Zswg: Vertical position of free leg foot mass point; Zb: Vertical position of body mass point; Xsup: Horizontal position of supporting leg foot mass point; Xswg: Horizontal position of free leg foot mass point; Xb: Horizontal position of body mass point; θby: Body posture angle about Y-axis relative to vertical direction; mb: Mass of body mass point; msup: Mass of supporting leg foot mass point; mswg: Mass of free leg foot mass point; J: Inertial moment of flywheel; Fx: Horizontal component of floor reaction force; Fz: Vertical component of floor reaction force; and My: Floor reaction force moment about desired ZMP (specifically, a component of floor reaction force moment about the

lateral axis (Y-axis)).

Please replace the paragraph beginning at **page 138, line 22**, and insert the following rewritten paragraph:

The positions of the mass points B1 to B7 of the first displacement dimension correcting model on the global coordinate system and the posture of the body 3 are to be geometrically defined on the basis of the instantaneous values of a motion of a simplified model gait. To be more specific, the position of the body mass point B1 of the first displacement dimension correcting model of the present embodiment on the global coordinate system is determined to be the position corresponding to the body position/posture of the simplified model gait, while the positions of the foot mass points B4 and B5 on the global coordinate system are determined to be the positions corresponding to the foot positions/postures of the simplified model gait. Further, the positions of the thigh mass points B2 and B3 are determined to be the positions corresponding to the position/posture of the thigh link of each leg 2 determined from the body position/posture and the positions/postures of both feet of the simplified model gait. In the first displacement dimension correcting model, the relative postures of the arms 5 and 5 in relation to the body 3 are constant, as described above, so that the positions of the arm mass points ~~5~~B6 and ~~5~~B7 on the global coordinate system will be uniquely defined on the basis of the body position/posture of the simplified model gait.

Please replace the paragraph beginning at **page 149, line 26**, and insert the following rewritten paragraph:

Here, the aforesaid displacement dimension corrected gait in the present embodiment will be supplementally explained with reference to Fig. 22. Fig. 22 illustrates the relationship between the positions of mass points Bi (i=1, 2, ..., 7), the posture angle of the body 3 (body link) and the postures of both arms 5, 5 of the second displacement dimension correcting model determined by the displacement dimension gait correcting subroutine described above and the positions of the mass points Bi, the posture angle of the body 3 (body link), and the postures of both arms 5, 5 of the first displacement dimension correcting model in a case where, for example, a gait is generated for projecting the distal portions of both arms 5 and 5 toward the front side of the body 3 from the state wherein the robot 1 is standing in the upright posture as shown in Fig. 20 while maintaining a desired ZMP at the same time. In this case, the posture state of the robot 1 of Fig. 21 shown above corresponds to the one in the case where the mass points Bi, the posture angle of the body ~~2~~3, and the postures of both arms 5, 5 (relative postures with respect to the body 3) of the second displacement dimension correcting model have been determined according to a simplified model gait. In other words, the positions of the mass points Bi, the posture angle of the body 3 and the postures of the arms ~~3~~5 of the second displacement dimension correcting model in Fig. 21~~;~~ that is, the placement of the elements of the second displacement dimension correcting model, is determined from an instantaneous motion of a simplified model gait according to the aforesaid geometric restrictive condition (2). Therefore, the placement of the elements of the second displacement dimension correcting model in this case corresponds to the second placement of the first invention.